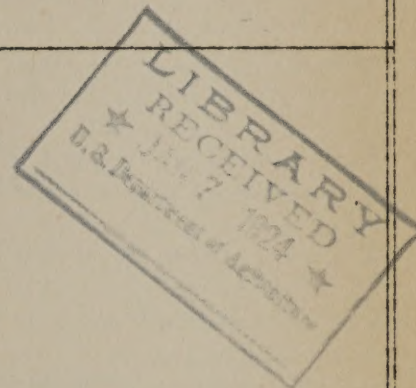


COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

U. S. Department of Agriculture
and State Agricultural Colleges
Cooperating.

Extension Service, Office of
Cooperative Extension Work
Washington, D. C.



POULTRY FEEDING

Excerpts from 1922 Annual Reports
of State and County
Extension Agents.

This circular is one of a series issued by the Office of Cooperative Extension Work as a part of its informational service to State and county extension workers, and was compiled at the request of L. E. Card, Ph. D., Professor of Poultry Husbandry, University of Illinois, Urbana. The material contained herein is not released for printed publication.

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FOURTH YEAR

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Arizona

Thirty-seven farmers have been assisted in giving balanced feeding rations to their poultry flocks. So far as possible these balanced rations have been based on home-grown feeds. Usually, meat scraps, bone meal, or grit were the only supplementary feeds that had to be bought. We have no definite figures from these men to form a basis of comparison with former years when they were not using balanced rations, but the farmers are convinced that use of the balanced ration has increased their egg production. The flocks are also in better physical condition. - C. R. Adamson, County Agent, Willcox, Cochise County.

California

During the year, the agricultural extension service demonstrated poultry feeding at 80 meetings, with an attendance of 2,628 people. Seventy-eight farm calls were requested by poultry raisers who had feeding problems. The poultry department of the Los Angeles County Farm Bureau conducted a feeding test at the Pomona egg-laying contest to determine the feeding value of several manufactured milk products. This test was watched with interest by the poultry raisers of the State. The popularity of the first year's work has led to additional projects along the same line. - B. H. Crocheron, Director of Extension Service, College of Agriculture, University of California, Berkeley.

*No attempt is made to cite all references to poultry feeding in this circular. Only selected extracts showing typical methods employed and results secured in a number of States are included. Owing to differences in the terminology used in various States and to other local conditions the information contained in this circular should be reviewed by the State subject-matter specialist concerned before incorporating any part of it in the extension plans for the State.

Colorado

The following is the record of a demonstration flock at West Plains, 32 miles from Sterling, the nearest market. The success of Mrs. M., the demonstrator who cared for this flock, has been encouraging to her neighbors. About 15 of them have come to the office during the year to inquire about fowls, eggs, care, and feeding. Mrs. M. and her husband worked together on the farm, but the crops brought little money this year. Two or three acres of alfalfa in the creek bottom was fed to the chickens and no cost account of it kept. All grain fed was listed at market price, but most of it was raised on the farm. Alfalfa and cabbage furnished the green feed, and the meat scrap came from jack rabbits, horse carcasses, and separated milk. No cost account of the milk was kept. We are proud of Mrs. M.'s success because she has been able to pay taxes and the interest on borrowed money, as well as the cost of poultry house construction, a new room on their tar paper house, and furnishings for two rooms. These could not have been paid by the sale of crops alone. - Susanne Thompson, Home Demonstration Agent, Sterling, Logan County.

Idaho

The feeding problem in Idaho is twofold: (1) To impress the people with the necessity for balanced rations for egg production, and (2) to make use of home-grown feeds as a means of economic consumption. The formula for standard balanced rations is as follows:

Feed	:	Ingredients	:	Pounds
Scratch	:	Wheat.....	:	10
	:	Corn.....	:	6
	:	Kafir.....	:	2
	:	Sunflower seed.....	:	1
Mash	:	Bran.....	:	4
	:	Shorts.....	:	4
	:	Oatmeal.....	:	4
	:	Corn meal.....	:	4
	:	Beef scrap.....	:	5 1/2
	:	Powdered charcoal.....	:	1/2

It can be seen from this formula that beef scrap makes a considerable portion of the whole. Beef scrap is expensive, costing about 6 cents per pound. Feeding tests at the University of Idaho experiment station show that sour skimmed milk properly fed is equal to or superior to beef scrap as an animal protein feed. The milk can be produced on the farm. A combination of milk cows and hens makes each more profitable. The cow consumes the bulky feeds and produces a valuable concentrated food, in the skim milk. The skim milk may be used to produce another high-priced article in the form of eggs at a much smaller cost than when expensive beef scrap is used. The beef scrap must be bought, but the milk may be produced on the farm. Each community may present a different feeding problem, and as a result, formulas must be used according to possible local feed supply. Heavy egg production is dependent largely upon proper feeding. Hens must be bred for eggs. - Fren Moore, Extension Poultryman, The Statehouse, Boise.

At all poultry demonstrations, feeding for winter egg production was discussed and proper feeding formulas given out. Fifty farmers in 12 communities have adopted improved feeding methods and greatly increased their egg production. Mrs. A. G. Shades of Golden Valley community was feeding nothing but wheat. Her hens were too fat and their production less than it ought to be. She added a dry mash, put corn into the scratch ration, reduced the amount of scratch grains fed, and supplemented this ration with soaked oats. As a result, the egg production of her hens increased 200 per cent in less than a month. - J. W. Barber, County Agent, Burley, Cassia County.

Illinois

Since it pays well to fatten chickens before selling them, the members were given the following directions: Confine the chickens in small, dark, cool quarters and force feed for two weeks, but no longer. Their weight increases 25 to 40 per cent in that time. Feed lightly the first day. Then give twice a day all they will eat in 20 minutes, of a ration of one part wheat shorts and two parts corn meal mixed to a thin batter with skim milk. Use either sweet milk all the time or sour milk all the time; do not change. Give no water or other feed except the batter. This produces the famous, high-priced, "milk-fed" chickens. - E. T. Robbins, County Agent, Clinton, De Witt County.

Kansas

The feeding of poultry for egg production has been one of the main topics of the poultrymen the past year. The problems of feeding were always discussed at the culling meetings, as it seems fitting that the keeper should know what to feed to get the best results from the hens left on the farm. As a result of these talks on feeding, 67 flocks received a mash ration which they were not receiving before. This does not include the 14 persons who were helped directly with feeding rations for poultry. Of 176 cases of poultry diseases, it was found that bad feed was the cause of 91 cases. In all but three cases where feed was the trouble we got immediate results from Epsom salts. This salts was given by dissolving it in water at the rate of 1 pound for every 100 hens and then pouring it over the mash. This was given to the poultry after they had fasted for 12 to 18 hours. - J. M. Goodwin, County Agent, Oskaloosa, Jefferson County.

Maryland

As a direct result of demonstration work in this county, nothing has shown such marked improvement as the poultry industry. Four years ago, not a balanced ration was fed in the county. To-day few poultrymen do not attempt, at least, to feed a balanced ration. Where a few tons of poultry mash formerly was sold during the year, now five or six carloads of mash feeds are used. The poultrymen have been taught to feed high protein mashes and to regulate the grain ration. They have been taught also the value of keeping shells and grit before the hens at all times. A few tons of oyster shells formerly supplied the county throughout the year. This year two carloads have been ordered, co-operatively, for this end of the county, and as many tons will be used in other parts of the county. - J. A. Towler, County Agent, Oakland, Garrett County.

Several years ago P. E. Twinning started with a small flock of chickens. He gradually increased his flock until last year he had about 350 Leghorns and a few Anconas. He feeds a small amount of wheat in the morning as a scratch feed in deep straw litter and all the corn they will eat at the late afternoon feeding. Mash is kept before the poultry in a hopper. The mash consists of the following mixtures: Two parts each of wheat bran, middlings, and corn, and one part each of ground oats, gluten, alfalfa meal, and fish meal. A larger percentage of fish meal would be necessary if thick milk were not kept before the fowls all the time. Alfalfa meal is fed for green feed, as the chickens are confined. Most of the feed is grown on the farm, and the poultry is giving better returns than any other phase of farming. Mr. Quandt, another poultry raiser, feeds a scratch mixture of two parts corn and one part each of oats and wheat in winter; in summer he reduces the corn to one part and increases the wheat to two parts. He keeps a mash of middlings with beef scrap in self-feeders before the chickens and feeds a wet mash once a day. He slightly warms the drinking water in the mornings. He also gives the chickens the run of rye pasture. Mr. Quandt has found poultry raising profitable and will increase the size of his flock. - C. Z. Keller, County Agent, Princess Anne, Somerset County.

Nevada

Twenty-two poultrymen fed balanced rations to 7,000 hens according to the county agent's directions. There were 3 meetings at poultry-feeding demonstrations with an attendance of 75. The average farm flock in the county is producing at the rate of 6 eggs per month during the fall and winter months of high prices. Reports from several poultrymen who are feeding balanced rations show that they are getting 18 eggs per month. This can be estimated as a profit to the poultrymen of \$1.20 per hen for the season, or a net profit of \$8,400 as a result of feeding balanced rations to 7,000 hens. - S. E. Merrill, County Agent, Reno, Washoe County.

North Carolina

This year we were determined to have some farmers try feeding balanced rations to livestock. We started early in the year with chickens. When we talked to a farmer about feeding dry mashers, rich in protein for egg production, he asked, "Why should I buy feed for my chickens when I have plenty of corn and green stuff for them to eat?" We countered with the question, "Why do you buy balanced fertilizers for your corn and cotton?" Then we proceeded to show the importance of protein in the ration for the production of eggs, the development of young animals, and the production of milk. We had a local mill purchase a ton of meat scrap and mix it as follows: 100 pounds of meat scrap, 100 pounds of ground wheat, 100 pounds of ground oats, and 100 pounds of ground corn. A farmer came to me and said, "You are advocating chickens as a sideline. I have 70 Rhode Island Reds and I am getting an average of 5 eggs a day. There is nothing in it." I replied, "I have had a mill mix a mash that I want you to try. Just try one bag of it and report the results to me." He did so, and in about three weeks he came to me and said, "The thing works. Today I brought to town 22 dozen eggs that were laid this week, and I got 40 cents per dozen for them." - T. J. Broom, County Agent, Monroe, Union County.

Ohio

It was impossible to get complete reports of the summer feeding campaign, although report blanks were sent out. Reports received show that the work was carried on in 21 counties and that 197 flock owners, that had not been feeding mash, started the feed. The production the week before feeding was 39,996 eggs. Three weeks after feeding, the production had increased to 52,117 eggs. This was an increase of 12,121 eggs or about 30 per cent. The fact that the production drops heavily at this time of year impressed more forcibly the value of feeding mash. The mash not only prevented the customary drop but increased the production. - E. L. Dakin, Extension Poultryman, College of Agriculture, Ohio State University, Columbus.

Commencing the first of June, 13 feeding demonstrations were conducted to keep records on the number of eggs produced daily. The hens were fed nothing but whole grains, as the average farm flocks are fed. Beginning the first week in July, these 13 farm flocks were fed a balanced ration consisting of: first, mash composed of equal parts of ground corn, ground oats, wheat middlings, wheat bran, and tankage or meat scraps; and second, scratch grains, such as corn, oats, and wheat. Eight mash feeders, as illustrated in an extension bulletin on poultry by E. L. Dakin of Ohio State University, were made, filled with the above-described mash and kept before the chickens all the time. The scratch grains were fed chiefly at night.

Partial results of the feeding demonstration are as follows:

		Number of eggs			
	Week	White	Rhode	Barred	
		Rocks	Island Reds	Rocks	
Before feeding mash..	1st	105	82	130	
After feeding mash...	1st	102	78	146	
	2d	137	115	196	
	3d	176	161	208	
	4th	177	123	186	
	5th	173	95	196	
Increase of last week over		65 per cent	14 per cent	50 per cent	
week before feeding.					

After the five weeks of feeding, demonstration meetings were held on each place to discuss the results of the feeding and to cull the flocks of hens. An average of only 15 per cent of the hens were culls. It was noticeable that many hens started laying after the mash was fed. The demonstrators felt well repaid for their work and expect to continue the feeding. Demonstrations of this kind do a great deal toward getting out the right kind of poultry information. - A. A. Olsen, County Agent, Bucyrus, Crawford County.

Twenty-one feeding demonstrations were held in the county. For these demonstrations, flocks were selected which had received no feed except grain during the summer. Records of production were kept for a week before the feeding was started. The flocks were then fed, in addition to the scratch feed, a mash, of which 20 per cent was meat scraps or tankage. This was continued for three or four weeks, and a daily record was kept of the egg production. At the end of the period the increase of the last week over the first week was figured, showing some phenomenal results. The increase ranged from 40 per cent to as high as 43 per cent. - E. H. Reed, Cambridge, Guernsey County.

Pennsylvania

Nine meetings, at which poultry feeding was discussed, were held with an attendance of 390 persons. The value of these feed discussions was illustrated on one farm, where 200 hens were kept. Three weeks before the demonstration, this farm was visited by the county agent, who found that the farmer was feeding only a small quantity of scratch grain, consisting of wheat and a little corn, and was feeding no mash. A dry mash was recommended to be kept before the hens all the time, and a proper proportion of scratch grain was suggested. At the time of the first visit, the 200 hens had been producing about 16 to 20 eggs per day. Two weeks after the change in feeding was made, the hens were producing at the rate of 108 eggs per day. This illustrates a fact which has been brought out at many of the poultry meetings conducted by the farm bureau throughout the county, that generally speaking, culling is necessary, but proper feeding is of even greater importance. - R. S. Clark, County Agent, Huntingdon, Huntingdon County.

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